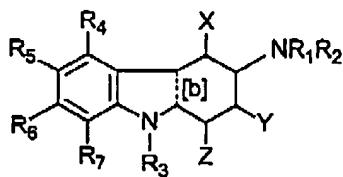


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently amended) A compound of formula I



Formula I

wherein

---[b] is a single or double bond;

Each X, Y, and Z is independently selected from H, -OH, -O-alkyl, and -O-substituted alkyl;

R₁ is selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl;

R₂ is selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl;

R₃ is -A-E-R₈;

A is selected from alkyl and substituted alkyl;

E is selected from -N(R₁₀)C(O)-, -C(O)N(R₁₀)-, -N(R₁₀)C(S)-, -C(S)N(R₁₀)-, -S(O)N(R₁₀)-, -N(R₁₀)S(O)-, -S(O)₂N(R₁₀)-, and -N(R₁₀)S(O)₂-;

Each R₄, R₅, R₆, and R₇ is independently selected from H, halogen, aryl, -CN, -NO₂, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, -OR₉, -NH₂, -C(O)NH₂, -C(S)NH₂, and -S(O)_naryl, provided that one of R₄, R₅, R₆, and R₇ is -S(O)_naryl, and that at least one of R₄, R₅, R₆, and R₇ is H;

n is 0, 1, or 2; and

Each R₈, R₉, and R₁₀ is independently selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl[.].

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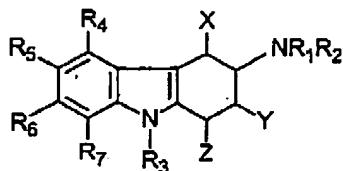
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Each R_{14} is independently selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocycloalkyl, phenyl, naphthyl, and heteroaromatic, provided that any of the alkyl, cycloalkyl, phenyl, naphthyl, or heteroaromatic is optionally substituted with up to 3 substituents independently selected from halogen, alkyl, CF_3 , OR_{12} , SR_{13} , CN , NO_2 , N_3 , $N(R_{12})_2$, $C(O)N(R_{12})_2$, and $C(S)N(R_{12})_2$;

Each R_{12} is independently selected from H, alkyl, and cycloalkyl, provided that any of the alkyl or cycloalkyl is optionally substituted with up to 2 substituents independently selected from halogen, CF_3 , NO_2 , NH_2 , N_3 , CN , OH , O -lower alkyl, and O -lower substituted alkyl; and pharmaceutically acceptable salts thereof.

2. (Currently amended) A compound of Claim 1 having the Formula Ib



Formula Ib

wherein

Each X, Y, and Z is independently selected from H, -OH, -O-alkyl, and -O-substituted alkyl;

R_1 is selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl;

R_2 is selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl;

R_3 is d-A-E- R_8 ;

A is selected from alkyl and substituted alkyl;

E is selected from $-N(R_{10})C(O)-$, $-C(O)N(R_{10})-$, $-N(R_{10})C(S)-$, $-C(S)N(R_{10})-$, $-S(O)N(R_{10})-$, $-N(R_{10})S(O)-$, $-S(O)_2N(R_{10})-$, and $-N(R_{10})S(O)_2-$;

Each R_4 , R_5 , R_6 , and R_7 is independently selected from H, halogen, aryl, $-CN$, $-NO_2$, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, $-OR_9$, $-NH_2$, $-C(O)NH_2$, $-C(S)NH_2$, and $-S(O)_n$ aryl, provided that one of R_4 , R_5 , R_6 , and R_7 is $-S(O)_n$ aryl, and that at least one of R_4 , R_5 , R_6 , and R_7 is H;

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n is 0, 1, or 2; and

Each R₈, R₉, and R₁₀ is independently selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl[[;]].

Each R₁₁ is independently selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocycloalkyl, phenyl, naphthyl, and heteroaromatic, provided that any of the alkyl, cycloalkyl, phenyl, naphthyl, or heteroaromatic is optionally substituted with up to 3 substituents independently selected from halogen, alkyl, CF₃, OR₁₂, SR₁₂, CN, NO₂, N₃, N(R₁₂)₂, C(O)N(R₁₂)₂, and C(S)N(R₁₂)₂;

Each R₁₂ is independently selected from H, alkyl, and cycloalkyl, provided that any of the alkyl or cycloalkyl is optionally substituted with up to 2 substituents independently selected from halogen, CF₃, NO₂, NH₂, N₃, CN, OH, O lower alkyl, and O lower substituted alkyl; and pharmaceutically acceptable salts thereof.

3. (Original) The compound of Claim 2, wherein one of R₁ and R₂ is H, and the other is H, alkyl, or substituted alkyl.

4. (Original) The compound of Claim 3, wherein R₅ is arylS(O)_n-, and wherein R₄, R₆, and R₇ are H.

5. (cancelled)

6. (cancelled)

7. (cancelled)

8. (cancelled)

9. (cancelled)

10. (Original) A pharmaceutical composition comprising a compound according to Claim 2.

11. (cancelled)

12. (cancelled)

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13. (cancelled)

14. (cancelled)

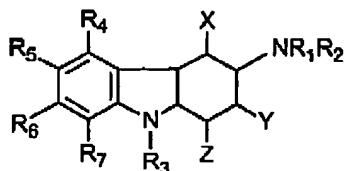
15. (cancelled)

16. (Original) The compound of Claim 2, wherein the compound includes at least one atom selected from Carbon-11, Nitrogen-13, Oxygen-15, and Fluorine-18.

17. (cancelled)

18. (cancelled)

19. A compound of Claim 1 having the Formula Ia



Formula Ia

wherein

Each X, Y, and Z is independently selected from H, -OH, -O-alkyl, and -O-substituted alkyl;

R1 is selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl;

R2 is selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl;

R3 is -A-E-R8;

A is selected from alkyl and substituted alkyl;

E is selected from -N(R10)C(O)-, -C(O)N(R10)-, -N(R10)C(S)-, -C(S)N(R10)-, -S(O)N(R10)-, -N(R10)S(O)-, -S(O)2N(R10)-, and -N(R10)S(O)2-;

Each R4, R5, R6, and R7 is independently selected from H, halogen, aryl, -CN, -NO2, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, -OR9, -NH2,

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~~-C(O)NH₂, -C(S)NH₂, and -S(O)_naryl, provided that one of R₄, R₅, R₆, and R₇ is -S(O)_naryl, and that at least one of R₄, R₅, R₆, and R₇ is H;~~

~~n is 0, 1, or 2; and~~

~~Each R₈, R₉, and R₁₀ is independently selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, and aryl[[;]].~~

~~Each R₁₁ is independently selected from H, alkyl, substituted alkyl, cycloalkyl, substituted cycloalkyl, heterocycloalkyl, phenyl, naphthyl, and heteroaromatic, provided that any of the alkyl, cycloalkyl, phenyl, naphthyl, or heteroaromatic is optionally substituted with up to 3 substituents independently selected from halogen, alkyl, CF₃, OR₁₂, SR₁₂, CN, NO₂, N₃, N(R₁₂)₂, C(O)N(R₁₂)₂, and C(S)N(R₁₂)₂;~~

~~Each R₁₃ is independently selected from H, alkyl, and cycloalkyl, provided that any of the alkyl or cycloalkyl is optionally substituted with up to 2 substituents independently selected from halogen, CF₃, NO₂, NH₂, N₃, CN, OH, O lower alkyl, and O lower substituted alkyl; and pharmaceutically acceptable salts thereof.~~

20. (Original) The compound of Claim 19, wherein one of R₁ and R₂ is H, and the other is H, alkyl, or substituted alkyl.

21. (Original) The compound of Claim 20, wherein R₅ is arylS(O)_n-, and wherein R₄, R₆, and R₇ are H.

22. (Original) The compound of Claim 21, wherein n is 2.

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (Original) A pharmaceutical composition comprising a compound according to Claim 19.

28. (cancelled)

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29. (cancelled)

30. (cancelled)

31. (cancelled)

32. (cancelled)

33. (Original) The compound of Claim 19, wherein the compound includes at least one atom selected from Carbon-11, Nitrogen-13, Oxygen-15, and Fluorine-18.

34. (cancelled)

35. (cancelled)

36. (cancelled)

37. (cancelled)

38. (cancelled)

39. (cancelled)